2. SITE HISTORY AND ENFORCEMENT ACTIVITIES

2.1 INEEL History

The INEEL, established in 1949 as the National Reactor Testing Station (NRTS), is a U.S. Department of Energy (DOE) managed reservation that is devoted to energy research and environmental-related activities. The NRTS was renamed the Idaho National Engineering Laboratory (INEL) in 1974 to reflect the engineering activities being conducted. In 1997, the INEL was changed to the Idaho National Engineering and Environmental Laboratory to reflect an emphasis on environmental research as well as the continued engineering and reactor research.

Historically, facilities at the INEEL were dedicated to developing and testing peaceful applications of nuclear power. Throughout the 50 years of INEEL operations, disposal practices have been implemented in compliance with state and federal regulations and policies established by DOE and its predecessors. Though reflective of the best technology of the day, some of these past practices are not acceptable by contemporary standards and have been discontinued. Contaminated structures and environmental media such as soil and water are the legacy of historical disposals. Occasional accidental releases have also occurred over time. In keeping with an emphasis on environmental issues, INEEL research is now focused on environmental restoration to address these contaminated media and waste management issues to minimize the potential for additional contaminant releases from current and future operations. Spent nuclear fuel management, hazardous and mixed waste management and minimization, cultural resource preservation, environmental engineering, protection of the environment, and remediation are also challenges addressed by current INEEL activities (DOE-ID 1997).

2.2 Waste Area Group 6 History

EBR-I and BORAX areas are located close together and have similar operational backgrounds and sources of contamination. Therefore, EBR-I and BORAX areas were consolidated into one waste area group for comprehensive evaluation (DOE-ID 1991). Other than limited action consisting of institutional controls, such as fences and warning signs, all remedial actions have been completed at the WAG 6 sites. A synopsis of the history for each facility is given below.

2.2.1 Experimental Breeder Reactor-I Area

The EBR-I complex is in the southwest portion of the INEEL approximately 3.2 km (2 mi) from U.S. Highway 20. The idea for a breeder reactor (a reactor that could produce more fuel that it uses) first occurred to scientists working on the nation's wartime atomic energy program in the 1940s when uranium was in short supply and the large bodies of uranium ore found in the 1950s were yet unknown. It was decided that the first power reactor would attempt to prove the theory of fuel breeding. In 1953, EBR-I scientists proved that a reactor could create more fuel than it used even while it created electricity. The first electricity ever generated from nuclear power occurred at EBR-I on December 20, 1951. Scientists continued to conduct reactor experiments at EBR-I until 1963.

The CERCLA sites related to EBR-I were underground storage tanks (USTs), septic systems, and radionuclide-contaminated soil as shown in Figure 3. Except for the active septic system that supports the EBR-I National Historic Landmark, most of the USTs and inactive septic systems have been removed from the EBR-I area. The radionuclide contaminated soil outside the EBR-I building was remediated in a removal action in 1995.

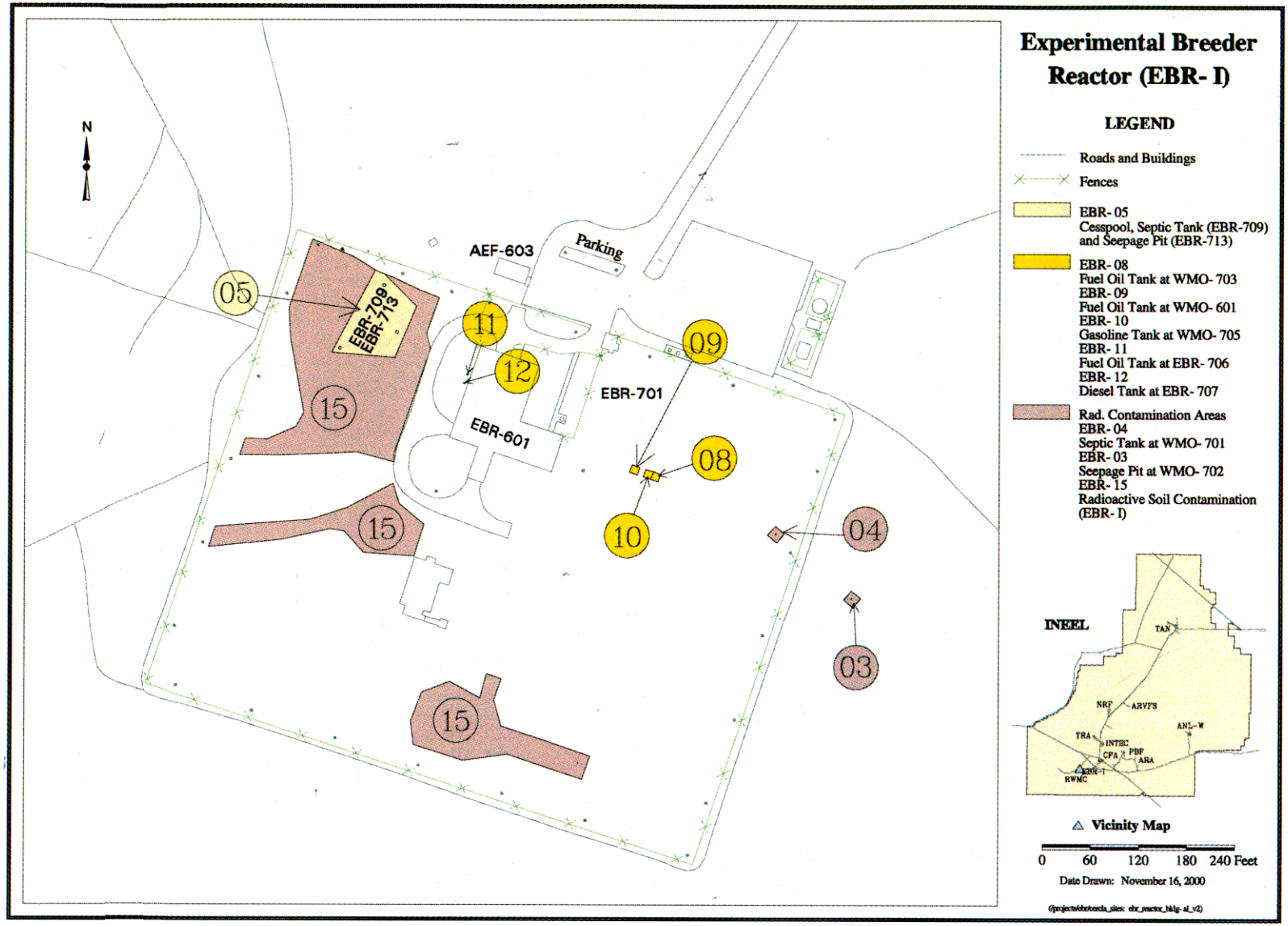

Figure 3. Physical configuration and location of CERCLA sites at the EBR-I area.

As shown in Figure 4, project buildings once included the EBR-I reactor building (EBR-601); two additions to EBR-601, a fuel storage facility, and personnel offices; the Zero Power Reactor No. 3 (ZPR-III) Reactor Training Facility (RTF) Building RTF-601 (later designated Waste Management Operations [WMO]-601); the Argonne Fast Source Reactor (AFSR) shielding building (EBR-605); the sodium potassium (NaK) storage pit; and the NaK disposal pad. Of the many buildings that once populated the EBR-I complex, only a small guardhouse, the original reactor building (EBR-601), and its office additions remain along with two nuclear jet engines, Heat Transfer Reactor Experiment (HTRE) assemblies HTRE-2 and HTRE-3, that are on display outside the EBR-I perimeter fence were moved from the Aircraft Nuclear Propulsion (ANP) program at Test Area North (TAN) to EBR-I in the 1980s.

Following its dedication as a Registered National Historic Landmark on August 25, 1966, by President Lyndon Johnson, EBR-I was also dedicated as a National Historic Mechanical Engineering Landmark in 1979 by the American Society of Mechanical Engineers, as a Historic Landmark for Advances in Materials Technology in 1979 by the American Society of Metals, and as a Nuclear Historic Landmark by the American Nuclear Society in 1987. The two Aircraft Nuclear Propulsion (ANP) engines are also part of the National Historic Landmark. The EBR-I reactor building and the ANP assemblies will be maintained and operated as a National Historic Landmark into the foreseeable future.

2.2.2 Boiling Water Reactor Experiment Area

The BORAX area, located approximately 1.21 km (0.75 mi) north of the EBR-I facility, was the site of five (BORAX-I, -II, -III, -IV, and -V) reactor experiments conducted between 1953 and 1964. These experiments began with BORAX-I, which was used to demonstrate the feasibility of boiling water reactors. Before this experiment, it had generally been thought that steam formation in a core would result in nuclear instabilities, but the BORAX series conclusively proved that steam actually helped stabilize nuclear reactions. The BORAX-I reactor was intentionally destroyed in 1954 to determine its inherent safety under extreme conditions and afterward was buried in place.

In late 1954, another BORAX facility was constructed a few hundred feet northeast of BORAX-I. Over the next 10 years, three reactors, BORAX-II, -III, and -IV, shared the same reactor vessel in this facility, but the experiments used different fuel designs and core configurations. The BORAX-V reactor used the same facility but used a new reactor vessel and core system. On July 17, 1955, the BORAX-III reactor gained historical significance as the first nuclear reactor in the world to supply electricity to a community (Arco, Idaho).

The CERCLA sites related to BORAX include USTs, septic systems, a leach pond, a ditch, a trash dump, and two former reactor sites as shown in Figure 5. Other than fences, none of the aboveground structures related to BORAX remain. All the USTs and septic systems have been removed. The BORAX leach pond was filled with clean dirt in 1985. The radionuclide contaminated soil in the BORAX ditch was remediated in a removal action in 1995. All the waste material was removed from the BORAX trash dump in 1985. The BORAX-I, II, -III, and -IV reactor fuels and vessel components were dispositioned by ANL personnel at the completion of each respective experiment. At the completion of the BORAX-V experiments, all the reactor fuel and portions of the internal reactor were removed by ANL-W personnel for dispositioning. Later, several phases of decontamination and decommissioning (D&D) removed the BORAX-V aboveground facility structures, stabilized the remaining underground structures, filled the basement with soil, and replaced concrete foundation blocks over the basement. The radionuclide-contaminated soil related to the BORAX-I reactor was remediated in 1997 (DOE-ID 1997) under the OU 5-05/6-01 ROD (DOE-ID 1996) and an engineered barrier cap was placed over the former reactor site.

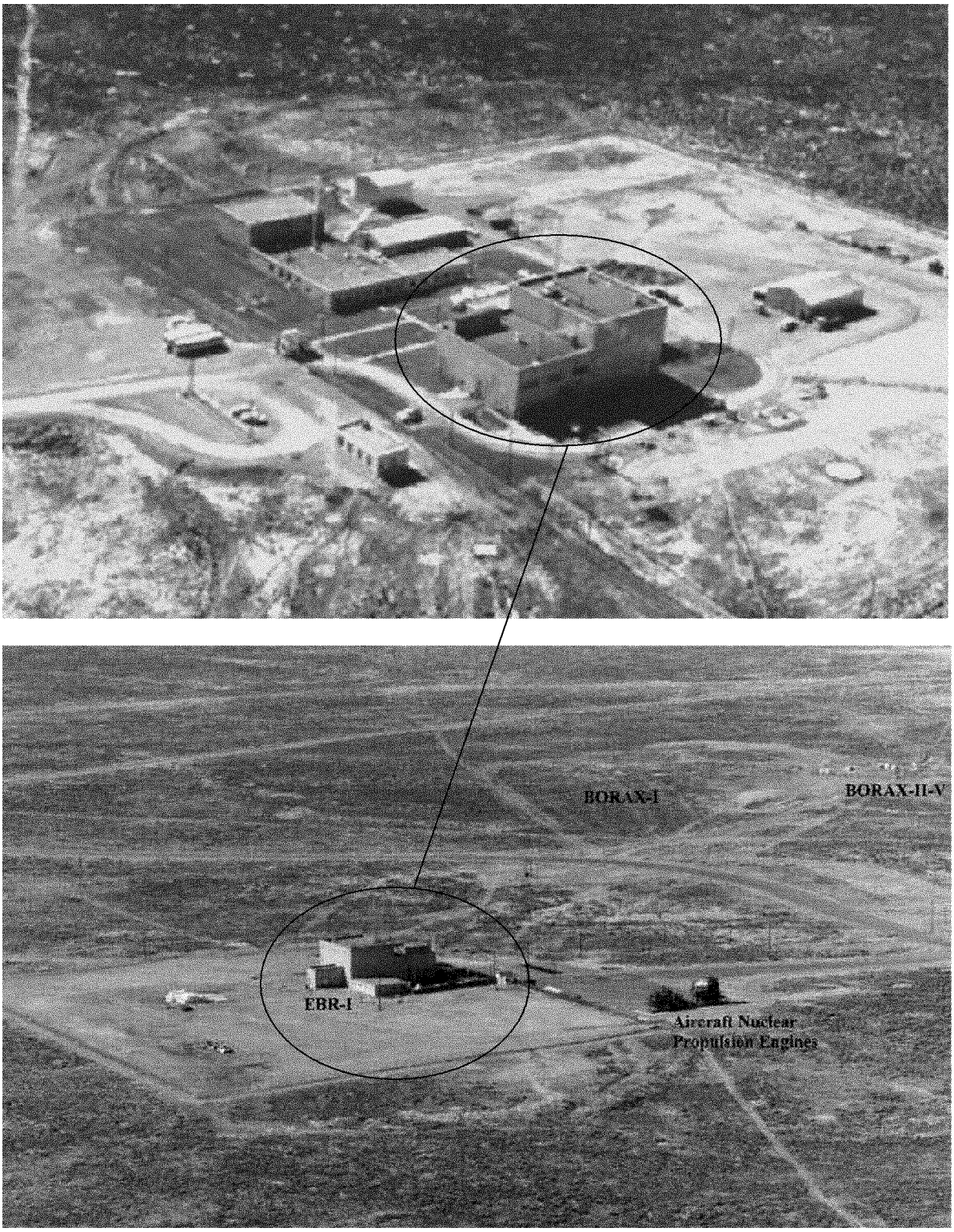

Figure 4. Aerial photographs of EBR-I facility before and after the D&D. The BORAX area after D&D is also shown in the top right corner of the bottom photograph.

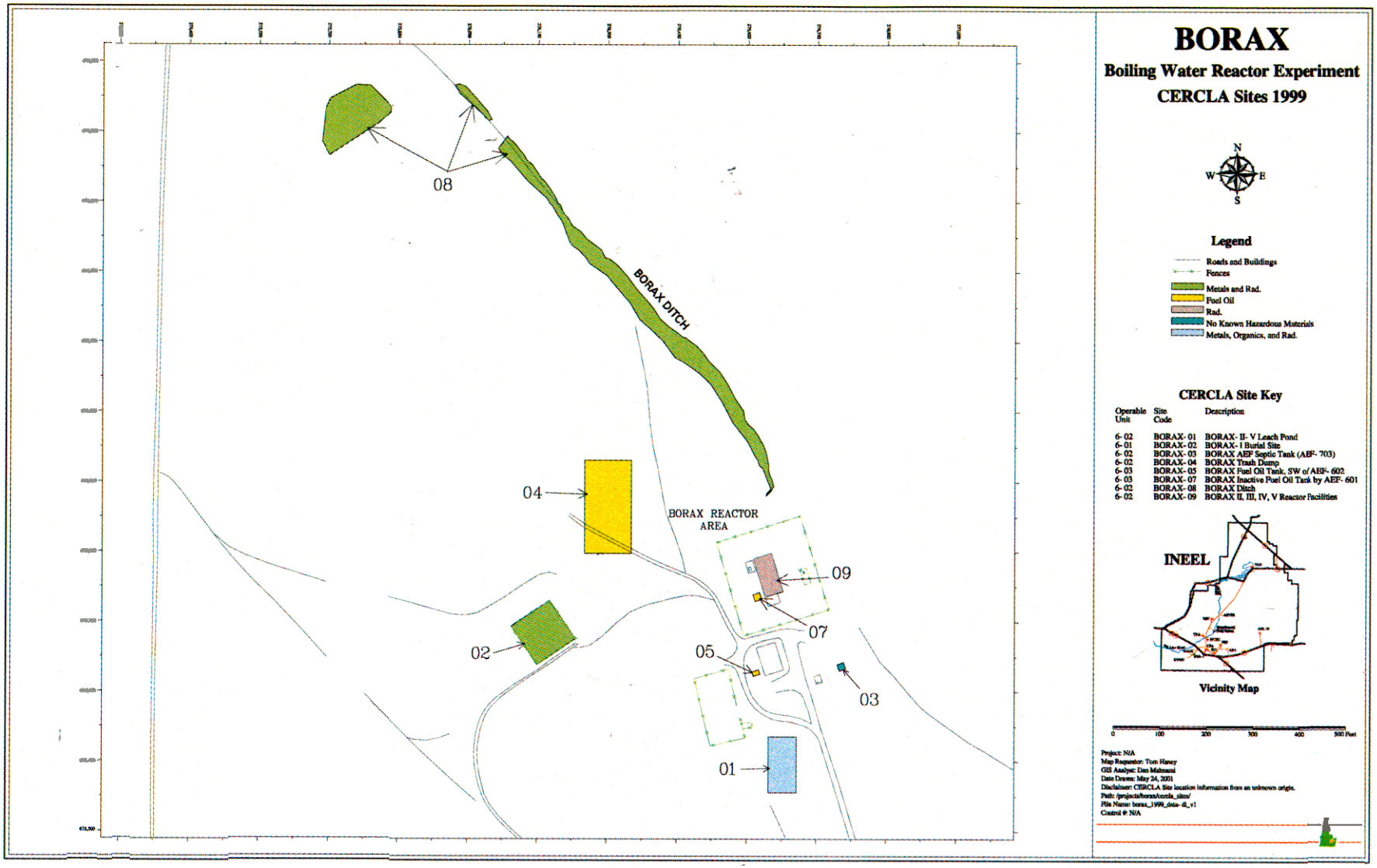

Figure 5. Physical configuration and location of CERCLA Sites at the BORAX area.

The BORAX-08 and 09 sites, the BORAX ditch and the BORAX-V reactor building, respectively, were added to WAG 6 after the signing of the Federal Facility Agreement and Consent Order (FFA/CO). A non-time-critical removal action (NTCRA) was conducted at the BORAX-08 Ditch between August 28 and September 18, 1995. A D&D removal and containment action was conducted at BORAX-09 beginning in April 1996, and concluding in May 1997. The photo presented in Figure 4 shows the EBR-I site as it appeared before and after D&D and the BORAX area after D&D. Figure 6 shows BORAX-I before and after remediation and the BORAX II-V facility before D&D.

2.3 Waste Area Group 10 History

WAG 10 includes miscellaneous INEEL sites and the portions of the SRPA outside the other WAGs. As discussed previously, the assessment of the SRPA and any new sites identified after the development of the OU 10-04 will be prepared under OU 10-08. The WAG 10 sites assessed under OU 10-04, include the LCCDA; the OMRE leach pond; the sites related to the EOCR, later called the Security Training Facility (STF); the STF sumps, pits, and gun range; and numerous ordnance areas. In addition, the ICPP Fly Ash Pit (CPP-66) was added to OU 10-04 for an ecological risk assessment (ERA).

The LCCDA consisted of two surface pits that were used to dispose of a variety of liquid corrosive chemicals. The LCCDA-01 "Old Disposal Pit" was an unlined pit that was used for disposal of corrosive liquids from 1960 to 1971. The LCCDA-02 "Limestone Treatment and Disposal Pit" was used from 1971 until 1980. The LCCDA-01 pit was abandoned and backfilled in 1971 and LCCDA-02 was graded flat and revegetated in 1980.

The OMRE was a nuclear reactor that operated from 1957 to 1963 approximately 3.25 km (2 mi) southeast of the Central Facilities Area (CFA). The OMRE leach pond was used for wastewater disposal from the OMRE reactor. The most contaminated portion of the pond soil was excavated in 1979 and sent to the Radioactive Waste Management Complex (RWMC). The pond has since been backfilled, and the entire area was revegetated with grass, but low levels of radionuclide contaminated soil is still present.

Construction of the EOCR was nearing completion when the program was cancelled. Because the EOCR was never an operating nuclear reactor, the sites related to the EOCR never received waste associated with the EOCR program. Some of the EOCR sites were removed during the D&D of the EOCR facility in 1999. All that remain are the empty and unused ponds and a septic tank. The STF Sumps and Pits were removed as part of the EOCR facility D&D. The STF Gun Range was used from about 1983 to 1990. Several million rounds of small-arms bullets were fired into targets set on the gun range berm.

Most ordnance, UXO, and UXO-related areas at the INEEL result from activities conducted at the NPG in the 1940s. Between 1942 and 1950, approximately 1,650 minor (3 to 5-in.) and major (16-in.) guns were tested at the NPG. Most of the projectiles were nonexplosive. However, experimental and test work was also preformed using explosives and live ordnance, primarily in mass detonations. During these large-scale mass detonation tests, hundreds of thousands of pounds of explosives in land mines, smokeless powder, and bombs were placed in explosives storage bunkers or open areas and detonated to determine the effects on collocated bunkers and facilities. In addition, stacks of ammunition were shot with high explosive projectiles to test their susceptibility to enemy fire. As a result of activities at the NPG, many projectiles (explosive and inert), explosive materials, pieces of explosives, UXO, NPG structures, and debris remain. At locations where these materials remain from explosive testing activities, UXO is visibly obvious and have undergone some limited remediation, such as at the Naval Ordnance Disposal Area (NODA). In other locations, where UXO remains from firing activities, projectiles have become imbedded in the ground (such as in large portions of the Naval Firing Range); therefore, UXO is not nearly as visibly obvious since debris from explosions will not exist.

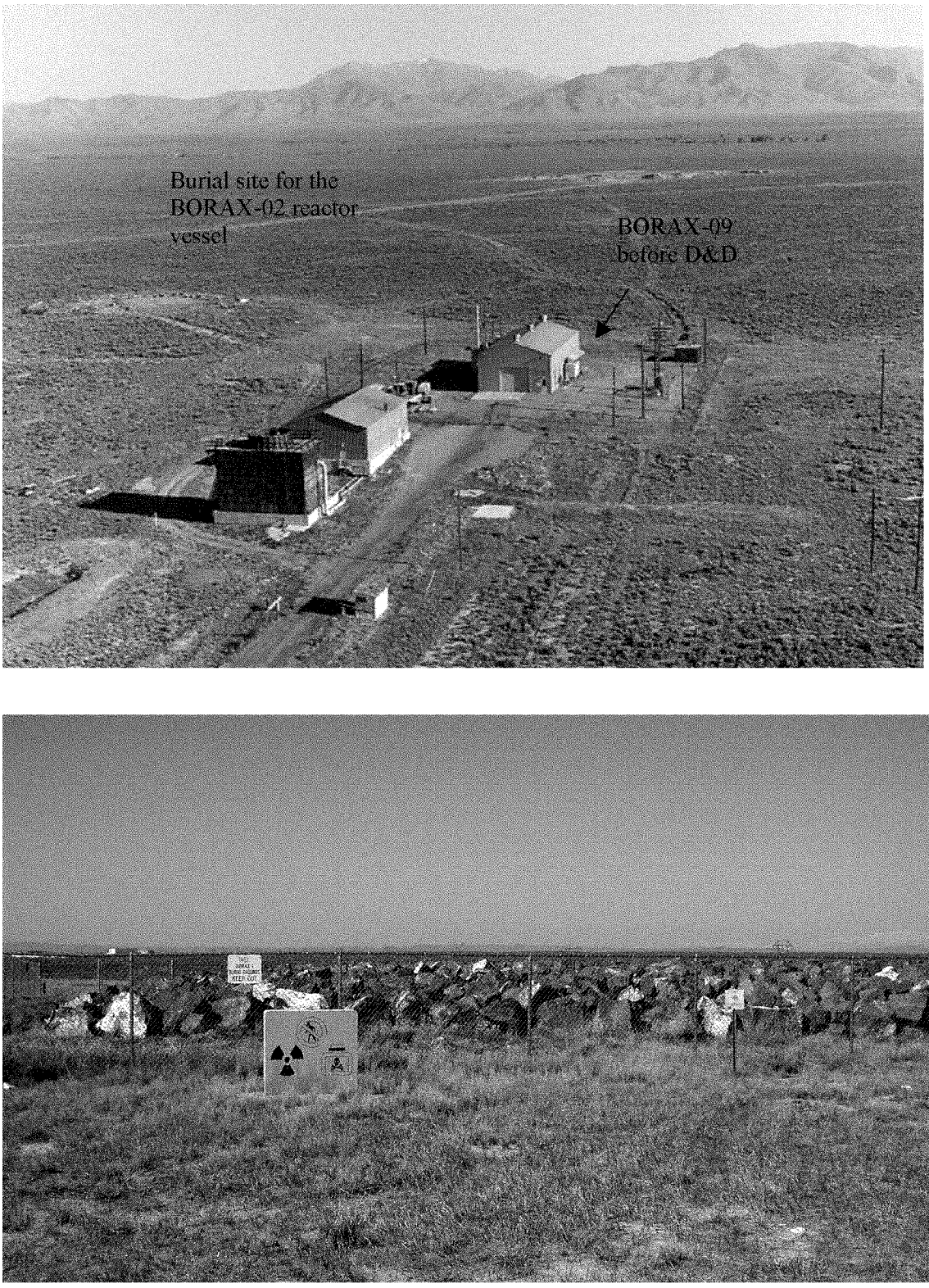

Figure 6. The BORAX facilities. The top photograph is an aerial view of the BORAX-I burial site and the BORAX-II-V facility before D&D in 1979. The bottom photograph is the BORAX-I burial site (site BORAX-02) taken in 2001 post remedial action.

The OU 10-06 was developed to assess radionuclide-contaminated soil areas at several of the WAGs. The OU 10-06 also included a non-time critical removal action (NTCRA) that remediated radionuclide contaminated soil at several sites in different WAGs. The "ownership" of the sites outside of WAG 6 and 10 reverted to the respective WAGs after the OU 10-06 NTCRA was complete. The residual risk at the two WAG 6 sites that were remediated under OU 10-06, EBR-15 and BORAX-08, were also evaluated in the Comprehensive OU 10-04 RI/FS.

The OU 10-07 U.S. West buried telecommunications cable was installed by the American Telephone and Telegraph Company (AT&T) in the early 1950s. The cable is approximately 58.7 km (36.5 mi) long and is buried approximately 0.9 to 1.2 m (3 to 4 ft) deep, parallel to and approximately 91 m (100 yd) east of Lincoln Boulevard at the INEEL. The cable consists of copper wiring, paper insulation, and lead sheathing approximately 1/8 in. thick. It is wrapped in spiraled steel and enclosed in jute wrapping impregnated with an asphalt-like substance. The cable originates at CFA and extends along Lincoln Boulevard to INTEC, TRA, the NRF, and TAN. The cable was cut and abandoned by U.S. West in 1990 when they installed a new fiber optic cable.

The CPP-66 (Fly Ash Pit) was identified in the OU 3-13 Final ROD (DOE-ID 1999b) as an OU 10-04 site of concern for ecological receptors. CPP-66 is the site of a pit used for disposal of ash generated by the ICPP Coal-Fired Steam Generation Facility (CFSGF), designated CPP-687, located southeast of the main INTEC security fence. Between 1984 and 1998, the CFSGF generated about 1,000 tons of ash per year. This ash was hydrated and placed into CPP-66, located due east of CFSGF. CPP-66 is approximately 244 × 122 × 3.4 m (800 × 400 × 11 ft) in size. The original ash pit built in 1984 had a capacity of 53,500 m^3 (70,000 yd^3) in 1991. It was enlarged to a total volume of 91,750 m^3 (120,000 yd^3). CPP-66 was retained and evaluated as a site of potential concern for ecological risk in the OU 10-04 Comprehensive RI/FS report (DOE-ID 2001).

2.4 Enforcement Activities

In January 1986, hazardous substance disposal sites within the INEEL that could pose an unacceptable risk to human health and safety or the environment were identified (EG&G 1986). The sites were ranked using either the EPA hazard ranking system for sites with chemical contamination or the DOE modified hazard ranking system for sites with radiological contamination. Based on the results of the hazard ranking, DOE-ID entered into a Consent Order and Compliance Agreement with Region 10 of the EPA and the U.S. Geological Survey (USGS) on July 28, 1986 (DOE-ID 1986). The agreement called for implementing an action plan to remediate active and inactive waste disposal sites at the INEEL under the authority of the Resource Conservation and Recovery Act (RCRA) (42 USC 6901 et seq.), which regulates the generation, transportation, treatment, storage, and disposal of hazardous waste. A hazard ranking score of 28.5 or higher qualifies a site for the National Priorities List (54 FR 48184) as amended by CERCLA (42 USC 9601 et seq.). Because several sites within the INEEL received scores in excess of 28.5, the INEEL in its entirety became a candidate for the National Priorities List.

On November 15, 1989, the EPA added the INEEL to the National Priorities List under CERCLA (42 USC 9601 et seq.). The FFA/CO (DOE-ID 1991) was negotiated and signed by DOE-ID, EPA, and the IDEQ, formerly the Idaho Department of Health and Welfare (IDHW), in December 1991 to implement the remediation of the INEEL under CERCLA. Effective December 9, 1991, the FFA/CO superseded parts of the Consent Order and Compliance Agreement.

The Secretary of Energy's policy statement (DOE 1994) on the National Environmental Policy Act (NEPA) (42 USC 4321 et seq.) stipulates that DOE will rely on the CERCLA process for review of actions to be taken under CERCLA. The policy statement also requires that DOE address NEPA values by incorporating such values, to the extent practicable, in documents and public involvement activities generated under CERCLA.

In the Action Plan of the FFA/CO (DOE-ID 1991), potential source areas (sites) within each WAG were assigned to an OU for investigation or remedial activities. The assignments were designed to match the rigor of the assessment process with the complexity of each site and to allow for flexibility in determining appropriate further action as each assessment or action was completed.

The FFA/CO originally identified 23 release sites under WAG 6, which were divided into one no action OU (called OU none) and five action OUs (6-01, 6-02, 6-03, 6-04, and 6-05). However, subsequent to the FFA/CO, two additional sites, BORAX-08: BORAX Ditch and BORAX-09: BORAX II-V Reactor Building, were added to WAG 6, OU 6-02. The FFA/CO specified that OU 6-05, the Comprehensive RI/FS for WAG 6, would be incorporated into the OU 10-04 Comprehensive RI/FS.

The FFA/CO originally identified 42 release sites under WAG 10, which were divided into one no action OU (called "OU none") and five action OUs (10-01, 10-02, 10-03, 10-04, and 10-05). However, since the first writing of the FFA/CO (DOE-ID 1991), additional sites and OUs have been added to WAG 10. Three OUs were added, OU 10-06, 10-07 and 10-08. The comprehensive investigation of the SRPA and the evaluation of potential new sites identified after the OU 10-04 RI/FS Work Plan was finalized, will take place in the OU 10-08 RI/FS.

The comprehensive investigation is the final action for WAG 10 identified in the FFA/CO (excluding OU 10-08). Several actions have already been implemented under environmental authorities at WAG 10. The actions conducted under the authority of CERCLA, RCRA, and a State of Idaho investigation are summarized below. Cleanup actions conducted under the authority of DOE management also are listed.

2.4.1 CERCLA Authority

WAGs 6 and 10 have completed one record of decision with an interim action, two time-critical removal actions (TCRA), and three NTCRA under CERCLA. Additionally, the ROD for OU 5-05 and OU 6-01 (DOE-ID 1996) addressed the BORAX-02: BORAX-I Burial site. The remedial action prescribed by the ROD consisted of consolidating the contaminated soil over the former reactor site and capping the soil with an engineered barrier. The remedy was implemented in 1996.

In 1998, a ROD and Interim Action for OU 10-05 (DOE-ID 1992) addressed 170 acres with six ordnance sites including the CFA-633 Naval Firing Site, the CFA Gravel Pit and French Drain, the Explosive Storage Bunkers, the National Oceanic and Atmospheric Administration site (NOAA), the Fire Station II and Range Fire Burn Area, and the Anaconda Power Line. During the interim action prescribed by the ROD, the action destroyed 130 UXO, detonated 61 kg (134 lb) of TNT and 47 kg (104 lb) of RDX, incinerated (off-Site) 141 m^3 (185 yd^3) of contaminated soil, and landfilled 3821 kg (8,423 lb) of metal fragments.

A 1994 CERCLA TCRA addressed 141 acres consisting of three ordnance sites, including NODA (surface only), the CFA Landfill, and the Twin Buttes Bombing Range. The action destroyed 1,408 UXO, detonated 10 kg (22 lb) bulk high explosives (HE), and landfilled 31,950 kg (70,440 lb) of metal fragments.

A 1995 CERCLA TCRA addressed 22.56 acres of subsurface ordnance at NODA. The action destroyed 462 UXO, detonated 8 kg (18 lb) bulk HE, and landfilled 17,900 kg (39,470 lb) of metal fragments.

A 1996 CERCLA NTCRA addressed 45 acres consisting of four ordnance sites including UXO East of TRA, Rail Car Explosion Area, Land Mine Fuze Burn Area, and Projectiles in the Riverbed adjacent to Rail Car Area. The action destroyed 221 UXO, detonated 29 kg (64 lb) bulk HE, and landfilled 18,260 kg (40,250 lb) of metal fragments.

A 1997 CERCLA Removal Action addressed 204 acres consisting of eight ordnance sites including NODA, Rail Car Explosion Area, MDA, NOAA, Experimental Field Station, Fire Station II, Craters East of INTEC, and Land Mine Fuze Burn Area. The action destroyed 146 UXO, detonated 156 kg (343 lb) bulk HE, and landfilled 18,226 kg (40,182 lb) of scrap.

A 1995 CERCLA NTCRA addressed radionuclide contaminated soil under OU 10-06 at two WAG 6 sites: the EBR-15 site and the BORAX-08 Ditch. The action removed approximately 900 m^3 (1,178 yd^3) of contaminated soil from the BORAX Ditch and 980 m^3 (1,279 yd^3) of contaminated soil from the EBR-15 area. The contaminated soil was placed in the Test Reactor Area (TRA) Warm Waste Pond, which was later capped. Concentrations of radionuclide contaminated soil (chiefly Cs-137) remaining at EBR-15 and BORAX-08 are less than the remediation goal of 16.7 pCi/g (DOE-ID 2001).

2.4.2 Other Programmatic Activities

Cleanup activities have been conducted under several other programs at WAG 10. The achievements of the D&D program, the underground tank management program, and other DOE activities are summarized below.

2.4.2.1 Decontamination and Dismantlement. Over time, the D&D program has conducted numerous cleanup activities within WAGs 6 and 10. For example, the D&D program completed demolition of the BORAX II-V facility in 1997 (Rodman 1996) and the EOCR reactor facilities in 1999 (Peatross 1997) and completed partial D&D of the OMRE-01 Leach Pond in 1979 (Chapin 1979). In addition, the following tanks and pits were removed as part of the D&D of facilities and structures at EBR-I or BORAX in 1995 (Burket 1995).

- EBR-02, the EBR-1 Septic Tank (AEF-702) and Seepage Pit (AEF-703).
- EBR-03, the EBR-1 Seepage Pit (WMO-702).
- EBR-04, the EBR-1 Septic Tank (WMO-701).
- EBR-06, the EBR-1 Septic Tank (EBR-714) and Seepage Pit (EBR-716).
- BORAX-03, the BORAX AEF Septic Tank (AEF-703).

2.4.2.2 Underground Storage Tank Program Action Authority. Most underground storage tanks within WAGs 6 and 10 have been removed. The following WAG 6 and 10 sites are tank sites that were removed by the "Tank Program" in 1990.

- BORAX-05, the BORAX Fuel Oil Tank, SW of AEF-602
- BORAX-07, the BORAX Inactive Fuel Oil Tank by AEF-601
- EBR-07, the EBR-1 (AEF-704) Fuel Oil Tank at AEF-603
- EBR-08, EBR-1 (WMO-703) Fuel Oil Tank
- EBR-10, the EBR-1 (WMO-705) Gasoline Tank
- EBR-11, the EBR-1 Fuel Oil Tank (EBR-706)

- EBR-12, the EBR-1 Diesel Tank (EBR-707)

- EBR-13, the EBR-1 Gasoline Tank (EBR-708)

2.4.2.3 Treatability Studies. One treatability study was completed under OU 10-04 to assess the treatment of explosives contaminated soil through composting. Conventional composting of explosives-contaminated soil can be an effective treatment, but explosives fragments can survive the composting process. A fundamental objective of this study was to determine if the increased efficiency of explosive compound biodegradation afforded by the use of a solvent, such as acetone, was warranted. Acetone pretreatments were found effective in dissolving TNT chunks into soil slurries, which were amenable to composting. (Radtke 2000). Section 9.7 discusses the development and evaluation of a remedial alternative using this technology to remediate the TNT/RDX contaminated soil.

2.4.2.4 Resource Conservation Recovery Act Authority. One clean closure under the resource conservation recovery act (RCRA) was completed in 1996 when the ARVFS-01 "Containers of Contaminated NaK" was shipped to ANL-W for treatment (Theil 1997).

In 1985, the NODA was added to the INEL's RCRA, Part A, permit application as a thermal treatment unit. The last treatment of hazardous waste occurred in 1988 (except for one emergency action/detonation in 1990). In June 1990, a Memorandum of Understanding (MOU) was developed between Environmental Programs (EP) and Waste Reduction Operations Complex (WROC). The MOU followed a joint decision between EPA and WROC to close the RCRA units in the NODA. EP agreed to fund and manage all activities necessary to formally close the NODA, including soil sampling and analysis, removal of contaminated soil, emergency removal of ordnance, maintenance of access signs and barricades, and preparation and submittal of all required documentation. WROC retained RCRA-operational responsibility for the NODA in the interim (PNP-03-94).

February 25, 1997, a letter was sent from Brian R. Monson, Chief of the Hazardous Waste Permitting Bureau (HWPB) of the IDEQ to Donald N. Rasch of DOE-ID. This letter was being sent in response to DOE's submittal of "*Reports and Summaries of Reports Describing the Federal Facility Agreement/Consent Order (FFA/CO) Actions Taken to Remove Hazardous Waste Residues from the Naval Ordinance Disposal Area at the Idaho National Engineering Laboratory*." The letter states that the DEQ, Air and Hazardous Waste Division, HWPB has reviewed the reports and determined that it appears all hazardous wastes and hazardous waste residues have been removed. Therefore, the HWPB terminated the Interim Status for the NODA, EPA ID No. ID 4890008952 with the understanding that the CERCLA program shall perform the final evaluation of the site in accordance with the FFA/CO and shall include any requisite ARAR and HWMA reviews prior to issuance of the final Record of Decision.

3. COMMUNITY PARTICIPATION

In accordance with CERCLA § 113(k)(2)(B)(i-v) and § 117 and the INEEL Community Relations Plan (DOE-ID 1995), opportunities for the public to obtain information and participate in the remedial investigation and decision process for OU 10-04 were provided from January 2002 through the present. The documents providing information and opportunities to provide input included a "kick-off" fact sheet, which briefly discussed the results of the RI/FS (DOE-ID 2001); briefings and presentations to interested groups; and public meetings.

In August 1999, a "kickoff" fact sheet about the OU 10-04 RI/FS was mailed to about 1,100 members of the public and INEEL employees. It was the initial opportunity for citizens to get involved in how the RI/FS would be conducted. The fact sheet encouraged interested citizens to submit initial comments on the investigation and request a briefing. No comments were received and no one requested a briefing.

In 2000 and 2001, a status of the RI/FS was discussed in the EM Progress issue. This annual newsletter was mailed to about 1,100 members of the public and INEEL employees. It was also posted on the INEEL's EM Internet page.

In early 2002, an "update fact sheet" about the OU 10-04 RI/FS was mailed to about 600 members of the public and more than 200 INEEL employees. This fact sheet also offered briefings to those interested in the OU 10-04 comprehensive investigation. It was the initial opportunity for the public to be involved in how the remedial actions would be conducted. No one requested a briefing at the time, but briefings were conducted later in the investigation process.

The DOE-ID briefed the INEEL Citizens Advisory Board and its Environmental Restoration Program Subcommittee on the OU 10-04 investigation. The citizen's advisory board is a group of 15 people who represent the citizens of Idaho and who make recommendations to DOE-ID, EPA, and the IDEQ on environmental restoration activities at the INEEL. The subcommittee reviewed a draft proposed plan and the majority of its comments have been incorporated into this ROD (DOE-ID 2002). In March 2002, the INEEL Citizens Advisory Board met again to finalize and submit its formal recommendations on the draft proposed plan to DOE-ID. The majority of comments from the Citizen's Advisory Board on the Proposed Plan have been incorporated into this ROD.

Upon release of the proposed plan, DOE-ID sent a press release to over 100 news organizations, schools and universities, elected officials, and others to announce the availability of the document and the 30-day public comment period, which was extended to 60 days at the request of the public. Additionally, newspaper ads ran in Idaho Falls, Arco, Fort Hall, Pocatello (2), Boise, Moscow, and Jackson, Wyoming. At least one television station and several radio stations in eastern Idaho aired a story about the public meetings.

Post cards were also mailed to all citizens on the INEEL mailing list. The cards informed citizens about public meeting locations, dates, and times, the 30-day public period and comment period extension to 60 days, and where to find additional information on the WAG 10, OU 10-04 project.

Personal calls were made to stakeholders in the Idaho Falls, Pocatello, and Boise areas to inform individuals about the upcoming public meetings and to determine whether briefings were desired. Prior to the public meetings, briefings were held with members of an Idaho-based environmental organization and the Shoshone-Bannock tribes. In 1999, members of the Shoshone-Bannock tribes toured areas of OU 10-04. The Shoshone Bannock Tribes' Tribal/DOE Agreement in Principle Program reviewed the Proposed Plan and provided comments.

Copies of the OU 10-04 Proposed Plan (DOE-ID 2002) were mailed to about 960 members of the public the week of January 21, 2002, urging citizens to comment on the Proposed Plan and to attend the public meetings. Public meetings were held in Boise on February 7 and Idaho Falls on February 12. Before the public meetings in each location, an availability session took place from 6 to 7 p.m. to allow for informal discussion of the issues. The public meetings began at 7 p.m. One Idaho Falls television station covered the February 12, 2002, meeting and aired the story on its 10 p.m. news and on the morning news program the next day.

For the general public, the activities associated with participating in the decision-making process included receiving the Update Fact Sheet or Proposed Plan, attending the availability sessions before the public meetings to informally discuss the issues, and submitting verbal and written comments to DOE-ID, EPA, and IDEQ during the 60-day public comment period.

Comment forms were available at the meeting locations (including a postage-paid business-reply form) to those attending the public meetings to submit written comments either at the meeting or by mail. A form for the public to use in evaluating the effectiveness of the meetings was on the reverse side of the meeting agenda. A court reporter was present at each meeting to take official transcripts of discussions and public comments. The meeting transcripts were placed in three INEEL information repositories in the Administrative Record section for the WAG 10 OU 10-04 Comprehensive RI/FS. For those who could not attend the public meetings but wanted to make formal written comments, a postage-paid written comment form was attached to the WAG 10, OU 10-04 Proposed Plan.

A total of about 22 people not associated with the project attended the public meetings. Overall, 8 citizens provided formal comments: 2 citizens provided oral comments and over 6 provided written comments (two people provided both oral and written comments). All comments received on the Proposed Plan were considered during the development of this ROD. The decision for this action is based on public input and on the information in the Administrative Record for WAG 10.

A Responsiveness Summary has been prepared as part of this ROD. All formal oral comments presented at the public meetings and all written comments received during the public comment period are included as Part 3 of this ROD and have been included in the Administrative Record for WAGs 6 and 10.

4. SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

The Operable Unit 10-04 Comprehensive RI/FS (DOE-ID 2001) is the culmination of all of the CERCLA evaluations performed for WAG 10 with the exception of the SRPA evaluation and evaluations of potential new release sites, which will be addressed in the OU 10-08 RI/FS and subsequent ROD. According to the FFA/CO (DOE-ID 1991), WAG 10 includes miscellaneous surface sites and liquid disposal areas throughout the INEEL that are not included within other WAGs. The boundary of WAG 10 is the INEEL boundary, or beyond as necessary to encompass real or potential impact from INEEL activities and any areas within the INEEL not covered by other WAGs.

The issuance of the ROD for OU 10-04, the comprehensive WAG 10 operable unit, marks the beginning of final remedial activities with the exceptions noted above. As specified in the Action Plan attached to the FFA/CO (DOE-ID 1991), post-ROD activities will include remedial design/remedial action (RD/RA) phases. The RD/RA will commence with the development of a scope of work to identify and establish deadlines for submitting other documents and to outline the overall strategy for managing the RD/RA. A draft scope of work will be submitted to EPA and IDEQ for review within 21 days of the issuance of this ROD.

The selected remedy for OU 10-04 comprises remedial actions that are protective of human health and the environment. These remedial actions will be implemented to mitigate the unacceptable risks to human or ecological receptors associated within the specific sites identified in the OU 10-04 Comprehensive RI/FS (DOE-ID 2001) and Proposed Plan (DOE-ID 2002). In addition, limited action and activities to complete the selected remedy will be implemented. The limited action comprising institutional controls at seven other sites and focused ecological monitoring are components of the selected remedy. In addition, several activities will be implemented at WAG 10 to complete the selected remedy for OU 10-04. These activities include disposition of stored and investigation-derived waste and groundwater monitoring.

The first remedial action will mitigate risk at three large ordnance areas where UXO may remain. The risk from UXO is the potential explosive hazard associated with uncontrolled detonation.

The second action addresses risk at five individual sites with soil contaminated with TNT and/or RDX. UXO is also likely to be present at these sites since they are within the ordnance areas.

The third action addresses risk at one site where contaminated soil is the only source medium. The soils are contaminated with lead fragments and particles. The lead will be separated from the soil. If allowed by DOE policy, the lead will be sent off the INEEL for recycling. If recycling is not permitted, the recovered lead will be stabilized to meet RCRA disposal criteria for waste that is RCRA characteristic for lead. After treatment to remove lead from the soil, it is anticipated the soil will not be RCRA characteristic for lead and can be managed as nonhazardous waste. However, if sampling and laboratory analysis indicates the soil is RCRA characteristic for lead, then the soil will be treated to meet RCRA disposal criteria and disposed in an approved facility on the INEEL.

The limited action implements institutional controls at seven additional sites at WAGs 6 and 10. Institutional controls will be maintained at these seven sites because residual contamination precludes unrestricted land use. In April 1999, the EPA Region 10 developed a policy for institutional controls. During the OU 10-04 remedial design/remedial action (RD/RA) phase, an O&M Plan, a FFA/CO primary document, will be developed. The OU 10-04 O&M Plan will contain the design and plans for implementation of institutional controls following the guidelines in the policy.

In addition to maintaining institutional controls for WAG 6 and 10 sites, OU 10-04 is responsible for developing and implementing an INEEL-wide institutional control O&M plan for all other CERCLA sites requiring institutional controls. This INEEL-wide O&M plan will be developed in accordance with the EPA Region 10 policy during the OU 10-04 RD/RA phase.

Institutional controls will reside with DOE or other government agency until 2095, based on the Comprehensive Facility and Land Use Plan, or until a 5-year review concludes unrestricted land use is allowable. It is anticipated that industrial use will continue at the INEEL for the period of institutional control and beyond.

In addition to maintaining institutional controls, OU 10-04 will implement long-term ecological monitoring at the INEEL. Based on the multiple uncertainties and assumptions in the OU 10-04 INEEL-wide ERA risk assessment, it was determined that ecological monitoring would be critical to ensure protection of this important ecosystem.

Groundwater will be sampled in existing wells downgradient from the TNT/RDX sites. If TNT, RDX, and/or degradation products are detected in any groundwater samples, monitoring will be continued as part of the OU 10-08 groundwater monitoring plan. If TNT, RDX, and/or degradation products are not detected in any groundwater sample, monitoring for these contaminants will not be continued.